

Notice of Allowability

Application No.

10/522,385

Examiner

Gilbert Y. Lee

Applicant(s)

NAKAOKA ET AL.

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/20/07.
2. ☒ The allowed claim(s) is/are 1,3-9 and 11-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jonathan Scherer on 10/10/07.

The application has been amended as follows:

IN THE CLAIMS:

Claim 1 has been amended to read:

1. (Currently Amended) A seal ring comprising:
 - a first seal portion which seals a sidewall surface of an annular groove on an unsealed fluid side of a shaft, the annular groove being provided in one of two members that are concentrically assembled so as to be relatively rotatable;
 - a second seal portion which seals a surface of the other of the two members, an annular interspace between the two members being sealed by the first and second seal portions,
 - a ring body with a separation portion separated in one place in a circumferential direction to include a first end part and a second end part,
 - said first seal portion being provided with linear contact portions which come into linear contact with the sidewall surface of the annular groove on the unsealed fluid side,

so as to extend continuously over a whole circumference of the seal ring from one side of said separation portion to the other side thereof, and

said linear contact portion which is provided on one side of said separation portion, and said linear contact portion which is provided on the other side of said separation portion being located at a distance in a radial direction of the seal ring so that an inner circumferential surface of the first end part on one side of the separation portion comes into contact with an outer circumferential surface of the second end part on the other side of the separation portion and said linear contact portions having a narrower width in the radial direction than adjacent parts of the ring body to control a quantity of leakage from a sealed fluid side to the unsealed fluid side of the shaft; and

wherein said linear contact portions include:

a first linear contact portion which is extended continuously from one side of said separation portion to the other side thereof, and which comes into linear contact with the sidewall surface of the annular groove on the unsealed fluid side; and

a second linear contact portion which lies nearer a groove bottom side of the annular groove than said first linear contact portion, which is extended continuously from one side of said separation portion to the other side thereof, and which comes into linear contact with the sidewall surface of the annular groove on the unsealed fluid side,

said linear contact portion provided on one side of said separation portion is said first linear contact portion, while said linear contact portion provided on the other side of said separation portion is said second linear contact portion.

Claims 2 and 10 have been cancelled.

The following is an examiner's statement of reasons for allowance: The claims of the present disclosure require a seal ring with a first seal portion, a second seal portion, a ring body, a separation portion including a first end part and a second end part, the first seal portion being provided with linear contact portions having an inner circumferential surface and an outer circumferential surface and having a narrower width in the radial direction than adjacent parts of the ring body; the linear contact portions further including a first linear contact portion and a second linear contact portion lying nearer a groove bottom side of an annular groove than said first linear contact portion. The closest prior art, Abiko (US Pub. No. 2003/0102633), discloses the invention substantially as claimed but fails to disclose a first and second linear contact portion with the second linear contact portion being closer to an annular groove than said first linear contact portion and there is no motivation, absent the applicant's own disclosure, to modify the Abiko reference in the manner required by the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

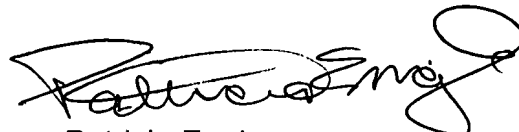
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gilbert Y. Lee whose telephone number is 571-272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL
October 12, 2007

A handwritten signature in black ink, appearing to read 'Patricia Engle', with a large, stylized loop at the end.

Patricia Engle
Supervisory Examiner
Tech. Center 3600